WHAT IS CLAIMED IS:

1. A method of printing an image onto a photosensitive media comprising the steps of:

imaging light from a light source through a uniformizing optics assembly to form uniformized imaging light;

separating said uniformized imaging light into a first light component, a second light component and a third light component;

passing said first light component through a first polarization beamsplitter element to produce a first polarization state of said first light component and a second polarization state of said first light component;

passing said first polarized first light component to a first spatial light modulator to create a telecentric illumination at said first spatial light modulator;

passing said second polarized first light component to a second spatial light modulator to create a telecentric illumination at said second spatial light modulator;

addressing said first spatial light modulator with a first signal to create a first modulated light beam and said second spatial light modulator with a second signal to create a second modulated light beam;

passing said first modulated light beam and said second modulated light beam through said first polarized beamsplitting element;

passing said second light component through a second polarization beamsplitter element to produce a first polarization state of said second light component and a second polarization state of said second light component;

passing said first polarized second light component to a third spatial light modulator to create a telecentric illumination at said third spatial light modulator;

passing said second polarized second light component to a fourth spatial light modulator to create a telecentric illumination at said fourth spatial light modulator;

addressing said third spatial light modulator with a third signal to create a third modulated light beam and addressing said fourth spatial light modulator with a fourth signal to create a fourth modulated light beam;

passing said third modulated light beam and said fourth modulated light beam through said second polarized beamsplitting element;

passing said third light component through a third polarization beamsplitter element to produce a first polarization state of said third light component and a second polarization state of said third light component;

passing said first polarized third light component to a fifth spatial light modulator to create a telecentric illumination at said fifth spatial light modulator;

passing said second polarized third light component to a sixth spatial light modulator to create a telecentric illumination at said sixth spatial light modulator;

addressing said fifth spatial light modulator with a fifth signal to create a fifth modulated light beam and addressing said sixth spatial light modulator with a sixth signal to create a sixth modulated light beam;

passing said fifth modulated light beam and said sixth modulated light beam through said third polarized beamsplitting element;

directing said first, second, third, fourth, fifth, and sixth modulated light beams toward a combiner element;

combining said first, second, third, fourth, fifth, and sixth modulated light beams with said combiner element to form a complete image; and

directing said complete image through a print lens assembly to expose said photosensitive media.

2. A method according to claim 1, wherein said first light component is red light.

3. A method according to claim 1, wherein said second light component is green light.

4. A method according to claim 1, wherein said third light component is blue light.

5. A method according to claim 1, wherein said light source is a monochromatic light source.

6. A method according to claim 1, wherein said light source is switchable between producing monochromatic light and producing polychromatic light.

7. A method according to claim 1, wherein said light source is a halogen light source.

8. A method according to claim 1, wherein said light source is a broadband light source.

9. A method according to claim 1, wherein said light source is a two dimensional array of red, green, and blue LEDs.

10. A method according to claim 1, wherein said light source is at least one laser.

11. A method according to claim 1, wherein said light source provides imaging light which matches a media sensitivity of said photosensitive media.

12. A method according to claim 1, wherein said light source is provided for a period of time which matches a media sensitivity of said photosensitive media.

13. A method according to claim 1, wherein said separating of uniformized imaging light into first, second, and third light components is achieved with filters.

14. A method according to claim 1, wherein said separating of uniformized imaging light into first, second, and third light components is achieved with dichroics.

15. A method according to claim 1, wherein said combiner element consists of a cross prism.

16. A method according to claim 1, wherein

said first spatial light modulator is located on a portion of a first facet of said first polarization beamsplitter and said second spatial light modulator is located on a portion of a second facet of said first polarization beamsplitter;

said third spatial light modulator is located on a portion of a first facet of said second polarization beamsplitter and said fourth spatial light modulator is located on a portion of a second facet of said second polarization beamsplitter; and

said fifth spatial light modulator is located on a portion of a first facet of said third polarization beamsplitter and said sixth spatial light

modulator is located on a portion of a second facet of said third polarization beamsplitter;

17. A method according to claim 1, wherein each modulator is addressed color sequentially.

18. A method according to claim 1, comprising the further step of varying the illumination level.

19. A method according to claim 1, comprising the further step of varying the duration of exposure time.

20. A method according to claim 1, comprising the further steps of:

creating an image by exposing said photosensitive media;
repositioning said photosensitive media; and
exposing said photosensitive media.

21. A method according to claim 1, wherein said signals address said spatial light modulators for a period of time which matches a media sensitivity of said photosensitive media.

22. A method according to claim 1, wherein said first, second, third, fourth, fifth and sixth signals are processed simultaneously with each other.

23. A method according to claim 1, wherein the temperature of a least one spatial light modulator is modified to match a media sensitivity of said photosensitive media.

24. A method according to claim 1, wherein said first, second, third, fourth, fifth, and sixth signals to address said first, second, third, fourth, fifth, and sixth spatial light modulators are divided into separate bitplanes.

25. A method according to claim 1, comprising the further step of varying the backplane voltage of each spatial light modulator.

26. A method according to claim 1, wherein said first, second, third, fourth, fifth, and sixth spatial light modulators are each optimized for a discrete range of visible light wavelengths.

27. A method according to claim 1, wherein said first and second spatial light modulators are optimized for red light, said third and fourth spatial light modulators are optimized for green light, and said fifth and sixth spatial light modulators are optimized for blue wavelengths.

28. A method according to claim 1, wherein said spatial light modulators include a plurality of modulators sites, said modulator sites being adapted to rotate a polarization state of incident light, and reflect said light through said spatial light modulators and back to said polarization beamsplitter elements.

29. A method according to claim 28, comprising the further steps of:

moving at least one said spatial light modulator by an amount based on a size of an individual modulator site; and

imaging said photosensitive media with new image data.

30. A method according to claim 28, wherein at least one said spatial light modulator is mounted on a frame which is movable in at least two directions.

31. A method according to claim 29, wherein said first, second, third, fourth, fifth, and sixth spatial light modulators are moved in synchronization.

32. A method according to claim 1, wherein

said first and said second spatial light modulators are simultaneously dithered, wherein said first polarization state of said first light component and said second polarization state of said first light component are of equal intensity and said first and second spatial light modulator addressing signals are the same;

said third and said fourth spatial light modulators are simultaneously dithered, wherein said first polarization state of said second light component and said second polarization state of said second light component are of equal intensity and said third and fourth spatial light modulator addressing signals are the same; and

said fifth and said sixth spatial light modulators are simultaneously dithered, wherein said first polarization state of said third light component and said second polarization state of said third light component are of equal intensity and said fifth and sixth spatial light modulator addressing signals are the same.

33. A method according to claim 1, wherein the bit depth of the image printed onto a photosensitive media is increased when:

said first and said second spatial light modulators are simultaneously dithered, wherein said first polarization state of said first light component and said second polarization state of said first light component are of

unequal intensity and said first and second spatial light modulator addressing signals contain different data;

said third and said fourth spatial light modulators are simultaneously dithered, wherein said first polarization state of said second light component and said second polarization state of said second light component are of unequal intensity and said third and fourth spatial light modulator addressing signals contain different data; and

said fifth and said sixth spatial light modulators are simultaneously dithered, wherein said first polarization state of said third light component and said second polarization state of said third light component are of unequal intensity and said fifth and sixth spatial light modulator addressing signals contain different data.

34. A method according to claim 1, wherein the time required for dithering is reduced when:

said first spatial light modulator is dithered in a horizontal direction and said second spatial light modulators is dithered in a vertical direction;

said third spatial light modulator is dithered in a horizontal direction and said fourth spatial light modulators is dithered in a vertical direction; and

said fifth spatial light modulator is dithered in a horizontal direction and said sixth spatial light modulators is dithered in a vertical direction.

35. A method according to claim 1, wherein the resolution of the image printed onto a photosensitive media is increased when:

said first spatial light modulator is diagonally offset from said second spatial light modulator;

said third spatial light modulator is diagonally offset from said fourth spatial light modulator; and

said fifth spatial light modulator is diagonally offset from said sixth spatial light modulator.

36. A method according to claim 15, comprising the further steps of:

passing said polarized first modulated light component through a first blur filter to form a first blurred light component;

passing said polarized second modulated light component through a second blur filter to form a second blurred light component;

passing said polarized third modulated light component through a third blur filter to form a third blurred light component;

directing said first, second and third blurred light components towards a cross prism element;

combining said blurred first, second and third component light beams with a cross prism to form a complete image; and

directing said complete image through a print lens assembly to expose said photosensitive media.

37. A method according to claim 1, wherein the print lens assembly magnifies the complete image onto the photosensitive media.

38. A method according to claim 1, wherein the print lens assembly demagnifies the complete image onto the photosensitive media.

39. A method according to claim 1, wherein the print lens assembly is swithchable between magnifying the complete image to demagnifying the complete image onto the photosensitive media.

40. A method of printing an image onto a photosensitive media comprising the steps of:

imaging red light from a light source through a uniformizing optics assembly to form uniformized red imaging light;

passing said uniformized red imaging light through a first polarization beamsplitter element to produce a first polarization state of said red light and a second polarization state of said red light;

passing said first polarized red light to a first spatial light modulator to create a telecentric illumination at said first spatial light modulator;

passing said second polarized red light to a second spatial light modulator to create a telecentric illumination at said second spatial light modulator;

addressing said first spatial light modulator with a first signal to create a first modulated red light beam and said second spatial light modulator with a second signal to create a second modulated red light beam;

passing said first modulated red light beam and said second modulated red light beam through said first polarized beamsplitting element;

imaging green light from a light source through a uniformizing optics assembly to form uniformized green imaging light;

passing said uniformized green imaging light through a second polarization beamsplitter element to produce a first polarization state of green light and a second polarization state of said green light;

passing said first polarized green light to a third spatial light modulator to create a telecentric illumination at said third spatial light modulator;

passing said second polarized green light to a fourth spatial light modulator to create a telecentric illumination at said fourth spatial light modulator;

addressing said third spatial light modulator with a third signal to create a first modulated green light beam and addressing said fourth spatial light modulator with a fourth signal to create a second modulated green light beam;

passing said first modulated green light beam and said second modulated green light beam through said second polarized beamsplitting element;

imaging blue light from a light source through a uniformizing optics assembly to form uniformized blue imaging light;

passing said uniformized blue imaging light through a third polarization beamsplitter element to produce a first polarization state of said blue light and a second polarization state of said blue light;

passing said first polarized blue light component to a fifth spatial light modulator to create a telecentric illumination at said fifth spatial light modulator;

passing said second polarized blue light component to a sixth spatial light modulator to create a telecentric illumination at said sixth spatial light modulator;

addressing said fifth spatial light modulator with a fifth signal to create a first modulated blue light beam and addressing said sixth spatial light modulator with a sixth signal to create a second modulated blue light beam;

passing said first and second modulated blue light beams through said third polarized beamsplitting element;

directing said first and second modulated red light beams, towards a combiner element;

directing said first and second modulated green light beams, towards a combiner element;

directing said first and second modulated blue light beams, towards a combiner element;

combining said first and second red, green and blue modulated light beams with a combiner to form a complete image; and

directing said complete color image through a print lens assembly to expose said photosensitive media.

41. A method according to claim 40, wherein said light source is a monochromatic light source.

42. A method according to claim 40, wherein said light source is switchable between producing monochromatic light and producing polychromatic light.

43. A method according to claim 40, wherein said red light source is a halogen light source with a filtering apparatus that allows only red light to be emitted; wherein said green light source is a halogen light source with a filtering apparatus that allows only green light to be emitted; and wherein said blue light source is a halogen light source with filtering that allows only blue light to be emitted.

44. A method according to claim 40, wherein said red light source is a two dimensional array of red LEDs; wherein said green light source is a two dimensional array of green LEDs; and wherein said blue light source is a two dimensional array of blue LEDs.

45. A method according to claim 40, wherein said red light source is at least one laser capable of emitting red light; wherein said green light source is at least one laser capable of emitting green light; and wherein said blue light source is at least one laser capable of emitting blue light.

46. A method according to claim 40, wherein said light source provides imaging light which matches a media sensitivity of said photosensitive media.

47. A method according to claim 40, wherein said light source is provided for a period of time which matches a media sensitivity of said photosensitive media.

48. A method according to claim 40, wherein:

said first spatial light modulator is located on a portion of a first facet of said first polarization beamsplitter and said second spatial light modulator is located on a portion of a second facet of said first polarization beamsplitter;

said third spatial light modulator is located on a portion of a first facet of said second polarization beamsplitter and said fourth spatial light modulator is located on a portion of a second facet of said second polarization beamsplitter; and

said fifth spatial light modulator is located on a portion of a first facet of said third polarization beamsplitter and said sixth spatial light modulator is located on a portion of a second facet of said third polarization beamsplitter.

49. A method according to claim 40, wherein each modulator is addressed color sequentially.

50. A method according to claim 40, comprising the further step of varying the illumination level.

51. A method according to claim 40, comprising the further step of varying the duration of exposure time.

52. A method according to claim 40, comprising the further steps of:

creating an image by exposing said photosensitive media;

repositioning said photosensitive media; and
exposing said photosensitive media.

53. A method according to claim 40, wherein said signals address said spatial light modulators for a period of time which matches a media sensitivity of said photosensitive media.

54. A method according to claim 40, wherein said first, second, third, fourth, fifth and sixth signals are processed simultaneously with each other.

55. A method according to claim 40, wherein the temperature of a least one spatial light modulator is modified to match a media sensitivity of said photosensitive media.

56. A method according to claim 40, wherein said first, second, third, fourth, fifth, and sixth signals to address said first, second, third, fourth, fifth, and sixth spatial light modulators are divided into separate bitplanes.

57. A method according to claim 40, comprising the further step of varying the backplane voltage of each spatial light modulator.

58. A method according to claim 40, wherein said first, second, third, fourth, fifth, and sixth spatial light modulators are each optimized for a discrete range of visible light wavelengths.

59. A method according to claim 40, wherein said first and second spatial light modulators are optimized for red light, said third and fourth spatial light modulators are optimized for green light, and said fifth and sixth spatial light modulators are optimized for blue wavelengths.

60. A method according to claim 40, wherein said spatial light modulators include a plurality of modulators sites, said modulator sites being adapted to rotate a polarization state of incident light, and reflect said light through said spatial light modulators and back to said polarization beamsplitter elements.

61. A method according to claim 60, comprising the further steps of:

moving at least one said spatial light modulator by an amount based on a size of an individual modulator site; and

imaging said photosensitive media with new image data.

62. A method according to claim 60, wherein at least one said spatial light modulator is mounted on a frame which is movable in at least two directions.

63. A method according to claim 62, wherein said first, second, third, fourth, fifth, and sixth spatial light modulators are moved in synchronization.

64. A method according to claim 40, wherein

said first and said second spatial light modulators are simultaneously dithered, wherein said first polarization state of said first light component and said second polarization state of said first light component are of equal intensity and said first and second spatial light modulator addressing signals are the same;

said third and said fourth spatial light modulators are simultaneously dithered, wherein said first polarization state of said second light component and said second polarization state of said second light component are

of equal intensity and said third and fourth spatial light modulator addressing signals are the same; and

said fifth and said sixth spatial light modulators are simultaneously dithered, wherein said first polarization state of said third light component and said second polarization state of said third light component are of equal intensity and said fifth and sixth spatial light modulator addressing signals are the same.

65. A method according to claim 40, wherein the bit depth of the image printed onto a photosensitive media is increased when:

said first and said second spatial light modulators are simultaneously dithered, wherein said first polarization state of said first light component and said second polarization state of said first light component are of unequal intensity and said first and second spatial light modulator addressing signals contain different data;

said third and said fourth spatial light modulators are simultaneously dithered, wherein said first polarization state of said second light component and said second polarization state of said second light component are of unequal intensity and said third and fourth spatial light modulator addressing signals contain different data; and

said fifth and said sixth spatial light modulators are simultaneously dithered, wherein said first polarization state of said third light component and said second polarization state of said third light component are of unequal intensity and said fifth and sixth spatial light modulator addressing signals contain different data.

66. A method according to claim 40, wherein the time required for dithering is reduced when:

said first spatial light modulator is dithered in a horizontal direction and said second spatial light modulators is dithered in a vertical direction;

said third spatial light modulator is dithered in a horizontal direction and said fourth spatial light modulators is dithered in a vertical direction; and

said fifth spatial light modulator is dithered in a horizontal direction and said sixth spatial light modulators is dithered in a vertical direction.

67. A method according to claim 40, wherein the resolution of the image printed onto a photosensitive media is increased when:

said first spatial light modulator is diagonally offset from said second spatial light modulator;

said third spatial light modulator is diagonally offset from said fourth spatial light modulator; and

said fifth spatial light modulator is diagonally offset from said sixth spatial light modulator.

68. A method according to claim 40, comprising the further steps of:

passing said polarized first modulated light component through a first blur filter to form a first blurred light component;

passing said polarized second modulated light component through a second blur filter to form a second blurred light component;

passing said polarized third modulated light component through a third blur filter to form a third blurred light component;

directing said first, second and third blurred light components towards a combiner element;

combining said blurred first, second and third component light beams with a combiner element to form a complete image; and

directing said complete image through a print lens assembly to expose said photosensitive media.

69. A method according to claim 40, wherein the print lens assembly magnifies the complete image onto the photosensitive media.

70. A method according to claim 40, wherein the print lens assembly demagnifies the complete image onto the photosensitive media.

71. A method according to claim 40, wherein the print lens assembly is swithchable between magnifying the complete image to demagnifying the complete image onto the photosensitive media.

72. An apparatus for printing an image onto a photosensitive media comprising:

a light source for providing light;

a uniformizing optics assembly for uniformizing said light;

a separator situated relative to said uniformizing optics, the separator capable of separating said uniformized light into first, second and third light components;

a first polarizing beamsplitter element, wherein said first polarizing beamsplitter element separates said first light component into a first polarization state and a second polarization state;

a first spatial light modulator, wherein said first spatial light modulator is illuminated by said first polarization state first light component in a telecentric manner and said first spatial light modulator creates first modulated light;

a second spatial light modulator, wherein said second spatial light modulator is illuminated by said second polarization state first light

component in a telecentric manner and said second spatial light modulator creates second modulated light;

a first blur filter, capable of blurring said first modulated and said second modulated light;

a second polarizing beamsplitter element, wherein said second polarizing beamsplitter element separates said second light component into a first polarization state and a second polarization state;

a third spatial light modulator, wherein said third spatial light modulator is illuminated by said first polarization state second light component in a telecentric manner and said third spatial light modulator creates third modulated light;

a fourth spatial light modulator, wherein said fourth spatial light modulator is illuminated by said second polarization state second light component in a telecentric manner and said fourth spatial light modulator creates fourth modulated light;

a second blur filter, capable of blurring said third modulated light and said fourth modulated light;

a third polarizing beamsplitter element, wherein said third polarizing beamsplitter element is capable of separating said third light component into a first polarization state and a second polarization state;

a fifth spatial light modulator, wherein said fifth spatial light modulator is illuminated by said first polarization state third light component in a telecentric manner and said fifth spatial light modulator creates fifth modulated light;

a sixth spatial light modulator, wherein said sixth spatial light modulator is illuminated by said second polarization state third light component in a telecentric manner and said sixth spatial light modulator creates sixth modulated light;

a third blur filter, capable of blurring said fifth modulated light and said sixth modulated light;

a combiner element, wherein said combiner element is capable of combining said blurred first, second, third, fourth, fifth, and sixth modulated light;

a print lens, wherein said print lens directs said combined light to a photosensitive media; and

wherein said imaging light from said light source is provided for a period of time which matches a media sensitivity of said photosensitive media.

73. An apparatus according to claim 72, wherein said light source is a monochromatic light source.

74. An apparatus according to claim 72, wherein said light source is switchable from providing monochromatic light to providing polychromatic light.

75. An apparatus according to claim 72, wherein said light source is a broadband visible source.

76. An apparatus according to claim 72, wherein said light source is a halogen light source.

77. An apparatus according to claim 72, wherein said light source is a two dimensional array of red, green, and blue LEDs.

78. An apparatus according to claim 72, wherein said light source is at least one laser.

79. An apparatus according to claim 72, wherein said separator of uniformized imaging light into first, second, and third light components is achieved with filters or dichroics.

80. An apparatus according to claim 72, wherein said separator consists of a red dichroic mirror and a blue dichroic mirror oriented in a cross configuration.

81. An apparatus according to claim 72, wherein said combiner prism is a cross prism.

82. An apparatus according to claim 72, wherein said spatial light modulators are comprised of modulator sites which are adapted to rotate a polarization state of incident light and reflect the light through the spatial light modulators and back to the beamsplitting elements.

83. An apparatus according to claim 72, wherein said first, second, and third spatial light modulators are each optimized for a discrete range of visible light wavelengths.

84. An apparatus according to claim 72, wherein said first and second spatial light modulators are optimized for red light, said third and fourth spatial light modulators are optimized for green light, and said fifth and sixth spatial light modulators are optimized for blue light.

85. An apparatus according to claim 72, wherein at least one said spatial light modulator is mounted on a frame which is movable in at least two directions.

86. An apparatus according to claim 72, further comprising:

a polarization element located upstream from said first polarization beamsplitting element;

a polarization element located upstream from said second polarization beamsplitting element; and

a polarization element located upstream from said third polarization beamsplitting element.

87. An apparatus according to claim 72, further comprising:

a polarization element located downstream from said first polarization beamsplitting element;

a polarization element located downstream from said second polarization beamsplitting element; and

a polarization element located downstream from said third polarization beamsplitting element.

88. An apparatus according to claim 72, wherein said print lens assembly magnifies the complete image onto the photosensitive media.

89. An apparatus according to claim 72, wherein said print lens assembly demagnifies the complete image onto the photosensitive media.

90. An apparatus according to claim 72, wherein said print lens assembly is switchable between a demagnifaction print lens assembly and a magnification print lens assembly.

91. An apparatus for printing an image onto a photosensitive media comprising:

a first light source for providing a first light wavelength;

a uniformizing optics assembly for uniformizing said first light wavelength;

a first polarizing beamsplitter element, wherein said first polarizing beamsplitter element separates said uniformized first light wavelength into a first polarization state and a second polarization state;

a first spatial light modulator, wherein said first spatial light modulator is illuminated by said first polarization state first light wavelength in a telecentric manner and said first spatial light modulator creates a first modulated light;

a second spatial light modulator, wherein said second spatial light modulator is illuminated by said second polarization state first light wavelength in a telecentric manner and said second spatial light modulator creates a second modulated light;

a first blur filter, capable of blurring said first modulated light and said second modulated light;

a second light source for providing a second light wavelength;

a uniformizing optics assembly for uniformizing said second light wavelength;

a second polarizing beamsplitter element, wherein said second polarizing beamsplitter element separates said uniformized second light wavelength into a first polarization state and a second polarization state;

a third spatial light modulator, wherein said third spatial light modulator is illuminated by said first polarization state second light wavelength in a telecentric manner and said third spatial light modulator creates a third modulated light;

a fourth spatial light modulator, wherein said fourth spatial light modulator is illuminated by said second polarization state second light wavelength in a telecentric manner and said fourth spatial light modulator creates a fourth modulated light;

a second blur filter, capable of blurring said third modulated light and said fourth modulated light;

a third light source for providing a third light wavelength; a uniformizing optics assembly for uniformizing said third light wavelength; a third polarizing beamsplitter element, wherein said third polarizing beamsplitter element is capable of separating said uniformized third light wavelength into a first polarization state and a second polarization state;

a fifth spatial light modulator, wherein said fifth spatial light modulator is illuminated by said first polarization state third light wavelength in a telecentric manner and said fifth spatial light modulator creates a fifth modulated light;

a sixth spatial light modulator, wherein said sixth spatial light modulator is illuminated by said second polarization state third light wavelength in a telecentric manner and said sixth spatial light modulator creates a sixth modulated light;

a third blur filter, capable of blurring said fifth modulated light and said sixth modulated light;

a combiner prism, wherein said combiner prism is capable of combining said blurred first, second, third, fourth, fifth and sixth modulated light;

a print lens, wherein said print lens directs said combined light to a photosensitive media; and

wherein said imaging light from said light source is provided for a period of time which matches a media sensitivity of said photosensitive media.

92. An apparatus according to claim 91, wherein at least one of said light sources is a monochromatic light source.

93. An apparatus according to claim 91, wherein at least one light source is switchable from providing monochromatic light to providing polychromatic light.

94. An apparatus according to claim 91, wherein:

said first light source is a broadband visible source with a filter to allow only red light to be emitted;

said second light source is a broadband visible source with a filter to allow only green light to be emitted; and

said third light source is a broadband visible source with a filter to allow only blue light to be emitted.

95. An apparatus according to claim 91, wherein:

said first light source is a broadband visible source with a switchable filter to allow red, green or blue light to be emitted;

said second light source is a broadband visible source with a switchable filter to allow red, green or blue light to be emitted; and

said third light source is a broadband visible source with a switchable filter to allow red, green or blue light to be emitted.

96. An apparatus according to claim 91, wherein:

said first light source is a halogen light source with a filter to allow only red light to be emitted;

said second light source is a halogen light source with a filter to allow only green light to be emitted; and

said third light source is a halogen light source with a filter to allow only blue light to be emitted.

97. An apparatus according to claim 91, wherein:

said first light source is a halogen light source with a switchable filter to allow red, green or blue light to be emitted;

said second light source is a halogen light source with a switchable filter to allow red, green or blue light to be emitted; and

said third light source is a halogen light source with a switchable filter to allow red, green or blue light to be emitted.

98. An apparatus according to claim 91, wherein said first, second and third light sources are a two dimensional array of red, green, and blue LEDs.

99. An apparatus according to claim 91, wherein said first light source is an array of red LEDs.

100. An apparatus according to claim 91, wherein said second light source is an array of green LEDs.

101. An apparatus according to claim 91, wherein said third light source is an array of blue LEDs.

102. An apparatus according to claim 91, wherein said first, second and third light sources are at least one laser.

103. An apparatus according to claim 91, wherein said first light source is a laser that emits red light.

104. An apparatus according to claim 91, wherein said second light source is a laser that emits green light.

105. An apparatus according to claim 91, wherein said third light source is a laser that emits blue light.

106. An apparatus according to claim 91, wherein said first, second and third light source are capable of emitting red, green and blue light.

107. An apparatus according to claim 91, wherein said combiner prism is a cross prism.

108. An apparatus according to claim 91, wherein said spatial light modulators are comprised of modulator sites which are adapted to rotate a polarization state of incident light and reflect the light through the spatial light modulators and back to the beamsplitting elements.

109. An apparatus according to claim 91, wherein said first, second, third, fourth, fifth, and sixth spatial light modulators are each optimized for a discrete range of visible light wavelengths.

110. An apparatus according to claim 91, wherein said first and second spatial light modulators are optimized for red light, said third and fourth spatial light modulators are optimized for green light, and said fifth and sixth spatial light modulators are optimized for blue light.

111. An apparatus according to claim 91, wherein at least one said spatial light modulator is mounted on a frame which is movable in at least two directions.

112. An apparatus according to claim 91, further comprising:

a polarization element located upstream from said first polarization beamsplitting element;

a polarization element located upstream from said second polarization beamsplitting element; and

a polarization element located upstream from said third polarization beamsplitting element.

113. An apparatus according to claim 91, further comprising:

a polarization element located downstream from said first polarization beamsplitting element;

a polarization element located downstream from said second polarization beamsplitting element; and

a polarization element located downstream from said third polarization beamsplitting element.

114. An apparatus according to claim 91, wherein said print lens assembly magnifies the complete image onto the photosensitive media.

115. An apparatus according to claim 91, wherein said print lens assembly demagnifies the complete image onto the photosensitive media.

116. An apparatus according to claim 91, wherein said print lens assembly is switchable between a demagnifaction print lens assembly and a magnification print lens assembly.